

Abstract

A magnetoresistive thin-film magnetic head with high corrosion resistance for recording medium having massive capacity is provided by providing a protective film having a thickness of 40 Å or less. Since the distance between the head and the medium is remarkably reduced, the film is suitable for a recording medium having high-packing density. The magnetoresistive type thin-film magnetic head is provided, wherein the following layers are formed on at least the surface of the head facing a recording medium: (A) a lower layer composed of a thin film having the composition represented by the formula selected from the group consisting of:

formula (i): $\text{SiC}_X\text{H}_Y\text{O}_Z\text{N}_W\text{F}_T\text{B}_U\text{P}_V$ (where $X = 0.5 \cdot 26$, $Y = 0.5 \cdot 13$, $Z = 0 \cdot 6$, $W = 0 \cdot 6$, $T = 0 \cdot 6$, $U = 0 \cdot 1$ and $V = 0 \cdot 1$, in terms of atomic ratio), and formula (ii): $\text{SiH}_Y\text{O}_Z\text{N}_W\text{F}_T\text{B}_U\text{P}_V$ (where $Y = 0.0001 \cdot 0.7$, $Z = 0 \cdot 6$, $W = 0 \cdot 6$, $T = 0 \cdot 6$, $U = 0 \cdot 1$ and $V = 0 \cdot 1$); and (B) an upper layer composed of a diamond-like thin film having the composition represented by the following formula: $\text{CH}_a\text{O}_b\text{N}_c\text{F}_d\text{B}_e\text{P}_f$ (where $a = 0 \cdot 0.7$, $b = 0 \cdot 1$, $c = 0 \cdot 1$, $d = 0 \cdot 1$, $e = 0 \cdot 1$ and $f = 0 \cdot 1$), and the total thickness of the lower layer and the upper layer is 40 Å or less. Also provided are a method for producing the same, and a magnetic head device using the same.